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Terms	Documents
mortierella alpina and (desaturase or oxidase or oxidoreductase)	28

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mortierella alpina and (desaturase or
oxidase or oxidoreductase)[Refine Search:](#)[Clear](#)**Search History**

Today's Date: 10/1/2001

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USPT,PGPB,JPAB,EPAB,DWPI	mortierella alpina and (desaturase or oxidase or oxidoreductase)	28	L4
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USPT,PGPB,JPAB,EPAB,DWPI	mortierella and desaturase	41	L2
USPT,PGPB,JPAB,EPAB,DWPI	mortierella	598	L1

WEST**Generate Collection****Search Results - Record(s) 1 through 10 of 28 returned.****1. Document ID: US 20010021522 A1**

L4: Entry 1 of 28

File: PGPB

Sep 13, 2001

PGPUB-DOCUMENT-NUMBER: 20010021522

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010021522 A1

TITLE: Process for production of dihomo-gamma-linolenic acid and lipid containing same

PUBLICATION-DATE: September 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kawashima, Hiroshi	Osaka		JP	
Akimoto, Kengo	Osaka		JP	
Yamada, Hideaki	Kyoto-shi		JP	
Shimizu, Sakayu	Kyoto-shi		JP	

US-CL-CURRENT: 435/134

ABSTRACT:

A process for the production of dihomo-.gamma.-linolenic acid comprising the steps of culturing a microorganism having an ability to produce arachidonic acid and having a reduced or lost .DELTA.5 desaturase activity to produce dihomo-.gamma.-linolenic acid or a lipid containing dihomo-.gamma.-linolenic acid, and recovering the dihomo-.gamma.-linolenic acid.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)[KMC](#) | [Drawn Desc](#) | [Image](#)**2. Document ID: US 6287829 B1**

L4: Entry 2 of 28

File: USPT

Sep 11, 2001

US-PAT-NO: 6287829
 DOCUMENT-IDENTIFIER: US 6287829 B1

TITLE: Process for the selective enzymatic hydroxylation of aldehydes and ketones

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stutz de Raadt; Anna	Graz	N/A	N/A	ATX
Kopper; Irene	Innsbruck	N/A	N/A	ATX
Griengl; Herfried	Graz	N/A	N/A	ATX
Klingler; Markus	Markt Hartmannsdorf	N/A	N/A	ATX
Braunegg; Gerhart	Graz	N/A	N/A	ATX

US-CL-CURRENT: 435/155; 435/147, 435/148, 435/832, 568/343, 568/376, 568/379, 568/420,
568/626

ABSTRACT:

A process for the selective enzymatic hydroxylation of aldehydes and ketones using chiral anchor-protective groups.

7 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KWC](#) | [Draw Desc](#) | [Image](#)

3. Document ID: US 6280982 B1

L4: Entry 3 of 28

File: USPT

Aug 28, 2001

US-PAT-NO: 6280982

DOCUMENT-IDENTIFIER: US 6280982 B1

TITLE: Process for production of dihomo-.gamma.-linolenic acid and lipid containing same

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kawashima; Hiroshi	Ibaraki	N/A	N/A	JPX
Akimoto; Kengo	Ibaraki	N/A	N/A	JPX
Yamada; Hideaki	Kyoto	N/A	N/A	JPX
Shimizu; Sakayu	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/134; 435/136, 435/187

ABSTRACT:

A process for the production of dihomo-.gamma.-linolenic acid comprising the steps of culturing a microorganism having an ability to produce arachidonic acid and having a reduced or lost .DELTA.5 desaturase activity to produce dihomo-.gamma.-linolenic acid or a lipid containing dihomo-.gamma.-linolenic acid, and recovering the dihomo-.gamma.-linolenic acid.

28 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KWC](#) | [Draw Desc](#) | [Image](#)

4. Document ID: US 6150144 A

L4: Entry 4 of 28

File: USPT

Nov 21, 2000

US-PAT-NO: 6150144

DOCUMENT-IDENTIFIER: US 6150144 A

TITLE: Process for producing omega-9 highly unsaturated fatty acid and lipid containing the same

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Akimoto; Kengo	Osaka	N/A	N/A	JPX
Kawashima; Hiroshi	Takatsuki	N/A	N/A	JPX
Shimizu; Sakayu	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/134

ABSTRACT:

The present invention discloses a process for producing lipid containing omega-9 highly unsaturated fatty acid by culturing in a medium a mutant strain obtained by mutation on a microorganism having the ability to produce arachidonic acid belonging to the genus Mortierella and so forth, in which .DELTA.12 desaturation activity is decreased or lost, but at least one of .DELTA.5 desaturation activity, .DELTA.6 desaturation activity and chain length elongation activity is elevated. Moreover, the present invention also discloses a process for producing omega-9 highly unsaturated fatty acid by collecting omega-9 highly unsaturated fatty acid from the culture or lipid described above.

13 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMPC	Draw Desc	Image
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 5. Document ID: US 6136574 A

L4: Entry 5 of 28

File: USPT

Oct 24, 2000

US-PAT-NO: 6136574

DOCUMENT-IDENTIFIER: US 6136574 A

TITLE: Methods and compositions for synthesis of long chain polyunsaturated fatty acids

DATE-ISSUED: October 24, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Knutzon; Deborah	Granite Bay	CA	N/A	N/A
Mukerji; Pradip	Gahanna	OH	N/A	N/A
Huang; Yung-Sheng	Upper Arlington	OH	N/A	N/A
Thurmond; Jennifer	Columbus	OH	N/A	N/A
Chaudhary; Sunita	Pearland	TX	N/A	N/A

US-CL-CURRENT: 435/134; 435/136

ABSTRACT:

The present invention relates to fatty acid desaturases able to catalyze the conversion of oleic acid to linoleic acid, linoleic acid to gamma-linolenic acid, or of alpha-linolenic acid to stearidonic acid. Nucleic acid sequences encoding desaturases, nucleic acid sequences which hybridize thereto, DNA constructs comprising a desaturase gene, and recombinant host microorganism or animal expressing increased levels of a desaturase are described. Methods for desaturating a fatty acid and for producing a desaturated fatty acid by expressing increased levels of a desaturase are disclosed. Fatty acids, and oils containing them, which have been desaturated by a desaturase produced by recombinant host microorganisms or animals are provided. Pharmaceutical compositions, infant formulas or dietary supplements containing fatty acids which have been desaturated by a desaturase produced by a recombinant host microorganism or animal also are described.

22 Claims, 18 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 16

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMC	Draw Desc	Image
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 6. Document ID: US H001893 H

L4: Entry 6 of 28

File: USPT

Oct 3, 2000

US-PAT-NO: H001893

DOCUMENT-IDENTIFIER: US H001893 H

TITLE: Enzymatic reduction method for the preparation of halohydrins

DATE-ISSUED: October 3, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Patel; Ramesh N.	Bridgewater	NJ	N/A	N/A
Szarka; Laszlo J.	East Brunswick	NJ	N/A	N/A
Banerjee; Amit	Yardley	PA	N/A	N/A
McNamee; Clyde G.	Lawrenceville	NJ	N/A	N/A

US-CL-CURRENT: 435/129; 435/280, 435/822

ABSTRACT:

An enzymatic reduction method, particularly a stereoselective enzymatic reduction method, for the preparation of halohydrins from haloketones. The halohydrin products are particularly useful in the preparation of epoxides, which may be employed as intermediates in the preparation of protease inhibitors such as retroviral protease inhibitors.

1 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)[KMC](#) | [Draw Desc](#) | [Image](#)

7. Document ID: US 6075183 A

L4: Entry 7 of 28

File: USPT

Jun 13, 2000

US-PAT-NO: 6075183
DOCUMENT-IDENTIFIER: US 6075183 A

TITLE: Methods and compositions for synthesis of long chain poly-unsaturated fatty acids in plants

DATE-ISSUED: June 13, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Knutzon; Deborah	Granite Bay	CA	N/A	N/A
Mukerji; Pradip	Gahanna	OH	N/A	N/A
Huang; Yung-Sheng	Upper Arlington	OH	N/A	N/A
Thurmond; Jennifer	Columbus	OH	N/A	N/A
Chaudhary; Sunita	Pearland	TX	N/A	N/A

US-CL-CURRENT: 800/281; 435/134, 435/252.3, 435/419, 435/430, 435/468, 435/471, 435/69.1,
536/23.2, 800/298

ABSTRACT:

The present invention relates to compositions and methods for preparing poly-unsaturated long chain fatty acids in plants, plant parts and plant cells, such as leaves, roots, fruits and seeds. Nucleic acid sequences and constructs encoding fatty acid desaturases, including .DELTA.5-desaturases, .DELTA.6-desaturases and .DELTA.12-desaturases, are used to generate transgenic plants, plant parts and cells which contain and express one or more transgenes encoding one or more desaturases. Expression of the desaturases with different substrate specificities in the plant system permit the large scale production of poly-unsaturated long chain fatty acids such as docosahexaenoic acid, eicosapentaenoic acid, alpha-linoleic acid, gamma-linolenic acid, arachidonic acid and the like for modification of the fatty acid profile of plants, plant parts and tissues. Manipulation of the fatty acid profiles allows for the production of commercial quantities of novel plant oils and products.

22 Claims, 7 Drawing figures Exemplary Claim Number: 19

Number of Drawing Sheets: 17

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KINIC](#) | [Drawn Desc](#) | [Image](#)

8. Document ID: US 6051754 A

L4: Entry 8 of 28

File: USPT

Apr 18, 2000

US-PAT-NO: 6051754

DOCUMENT-IDENTIFIER: US 6051754 A

TITLE: Methods and compositions for synthesis of long chain poly-unsaturated fatty acids in plants

DATE-ISSUED: April 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Knutzon; Deborah	Granite Bay	CA	N/A	N/A

US-CL-CURRENT: 800/281; 435/252.3, 435/419, 536/23.2

ABSTRACT:

The present invention relates to compositions and methods for preparing poly-unsaturated long chain fatty acids in plants, plant parts and plant cells, such as leaves, roots, fruits and seeds. Nucleic acid sequences and constructs encoding fatty acid desaturases, including .DELTA.5-desaturases, .DELTA.6-desaturases and .DELTA.12-desaturases, are used to generate transgenic plants, plant parts and cells which contain and express one or more transgenes encoding one or more desaturases. Expression of the desaturases with different substrate specificities in the plant system permit the large scale production of poly-unsaturated long chain fatty acids such as docosahexaenoic acid, eicosapentaenoic acid, alpha-linoleic acid, gamma-linolenic acid, arachidonic acid and the like for modification of the fatty acid profile of plants, plant parts and tissues. Manipulation of the fatty acid profiles allows for the production of commercial quantities of novel plant oils and products.

14 Claims, 8 Drawing figures Exemplary Claim Number: 7

Number of Drawing Sheets: 21

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWMC	Draw Desc	Image
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 9. Document ID: US 5981588 A

L4: Entry 9 of 28

File: USPT

Nov 9, 1999

US-PAT-NO: 5981588

DOCUMENT-IDENTIFIER: US 5981588 A

TITLE: .omega.9-unsaturated fatty acid compositions for preventing or alleviating medical symptoms caused by delayed allergy reactions

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Akimoto; Kengo	Osaka	N/A	N/A	JPX
Kawashima; Hiroshi	Takatsuki	N/A	N/A	JPX
Hamazaki; Tomohito	Toyama	N/A	N/A	JPX
Sawasaki; Shigeki	Toyama	N/A	N/A	JPX

US-CL-CURRENT: 514/560; 435/134

ABSTRACT:

A preventive or improving agent for medical symptoms accompanying delayed allergy reactions which contains an .omega.9-unsaturated fatty acid as an effective component is provided.

9 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWMC	Draw Desc	Image
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10. Document ID: US 5972664 A

L4: Entry 10 of 28

File: USPT

Oct 26, 1999

US-PAT-NO: 5972664

DOCUMENT-IDENTIFIER: US 5972664 A

TITLE: Methods and compositions for synthesis of long chain poly-unsaturated fatty acids

DATE-ISSUED: October 26, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Knutzon; Deborah	Granite Bay	CA	N/A	N/A
Mukerji; Pradip	Grahanna	OH	N/A	N/A
Huang; Yung-Sheng	Arlington	OH	N/A	N/A
Thurmond; Jennifer	Columbus	OH	N/A	N/A
Chaudhary; Sunita	Westerville	OH	N/A	N/A

US-CL-CURRENT: 435/136; 435/189, 435/252.3, 435/254.3, 435/320.1, 536/23.2

ABSTRACT:

The present invention relates to a fatty acid .DELTA.5-desaturase able to catalyze the conversion of dihomoo-gamma-linolenic acid to arachidonic acid. Nucleic acid sequences encoding a .DELTA.5-desaturase, nucleic acid sequences which hybridize thereto, DNA constructs comprising a .DELTA.5-desaturase gene, and recombinant host microorganism or animal expressing increased levels of a .DELTA.5-desaturase are described. Methods for desaturating a fatty acid at the .DELTA.5 position and for producing arachidonic acid by expressing increased levels of a .DELTA.5 desaturase are disclosed. Fatty acids, and oils containing them, which have been desaturated by a .DELTA.5-desaturase produced by recombinant host microorganisms or animals are provided. Pharmaceutical compositions, infant formulas or dietary supplements containing fatty acids which have been desaturated by a .DELTA.5-desaturase produced by a recombinant host microorganism or animal also are described.

52 Claims, 21 Drawing figures Exemplary Claim Number: 34
Number of Drawing Sheets: 17

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)
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Terms	Documents
mortierella alpina and (desaturase or oxidase or oxidoreductase)	28

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Search Results - Record(s) 11 through 20 of 28 returned.**11. Document ID: US 5968809 A**

L4: Entry 11 of 28

File: USPT

Oct 19, 1999

US-PAT-NO: 5968809

DOCUMENT-IDENTIFIER: US 5968809 A

TITLE: Methods and compositions for synthesis of long chain poly-unsaturated fatty acids

DATE-ISSUED: October 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Knutzon; Deborah	Granite Bay	CA	N/A	N/A
Mukerji; Pradip	Gahanna	OH	N/A	N/A
Huang; Yung-Sheng	Upper Arlington	OH	N/A	N/A
Thurmond; Jennifer	Columbus	OH	N/A	N/A
Chaudhary; Sunita	Westerville	OH	N/A	N/A

US-CL-CURRENT: 435/254.2; 435/189, 435/254.21, 435/320.1, 435/325, 435/410, 536/23.1,
536/23.2, 536/23.7, 536/23.74, 536/24.32

ABSTRACT:

The present invention relates to fatty acid desaturases able to catalyze the conversion of oleic acid to linoleic acid, linoleic acid to gamma-linolenic acid, or of alpha-linolenic acid to stearidonic acid. Nucleic acid sequences encoding desaturases, nucleic acid sequences which hybridize thereto, DNA constructs comprising a desaturase gene, and recombinant host microorganism or animal expressing increased levels of a desaturase are described. Methods for desaturating a fatty acid and for producing a desaturated fatty acid by expressing increased levels of a desaturase are disclosed. Fatty acids, and oils containing them, which have been desaturated by a desaturase produced by recombinant host microorganisms or animals are provided. Pharmaceutical compositions, infant formulas or dietary supplements containing fatty acids which have been desaturated by a desaturase produced by a recombinant host microorganism or animal also are described.

30 Claims, 18 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 16

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KOMC	Draw Desc	Image
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12. Document ID: US 5762935 A

L4: Entry 12 of 28

File: USPT

Jun 9, 1998

US-PAT-NO: 5762935
 DOCUMENT-IDENTIFIER: US 5762935 A

TITLE: Anti-inflammatory and infection protective effects of sesamin-based lignans

DATE-ISSUED: June 9, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Forse; R. Armour	Brookline	MA	N/A	N/A
Chavali; Sambasiva	Boston	MA	N/A	N/A

US-CL-CURRENT: 424/776; 424/725, 514/469, 514/783, 514/885

ABSTRACT:

The uses of lignans of the sesamin family to treat infection and inflammation is disclosed. These lignans may be delivered enterally or parenterally and either in the form of sesame oil or in purified form. A total parenteral nutrition solution or dietary supplement are the preferred forms of administration.

13 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [KOMC](#) | [Draw Desc](#) | [Image](#)

13. Document ID: US 5674853 A

L4: Entry 13 of 28

File: USPT

Oct 7, 1997

US-PAT-NO: 5674853

DOCUMENT-IDENTIFIER: US 5674853 A

TITLE: External formulations for treatment of inflammation and infection

DATE-ISSUED: October 7, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Forse; R. Armour	Brookline	MA	N/A	N/A
Chavali; Sambasiva	Boston	MA	N/A	N/A

US-CL-CURRENT: 514/25; 424/755, 424/764, 424/765, 424/776, 424/DIG.13, 514/464, 514/468,
514/783, 514/825, 514/886, 514/887, 514/904, 514/905

ABSTRACT:

The present invention features saponin containing enteral formulations for treatment of infection and inflammation. These saponin containing formulations are particularly useful in conjunction with oils rich in omega.3 polyunsaturated fatty acids such as fish oils and flax oil but also show benefits with omega.6 rich oils such as borage oil, black currant seed oil, canola oil and rapeseed oil. These formulations may also contain a lignan from the sesamin family.

16 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [KOMC](#) | [Draw Desc](#) | [Image](#)

14. Document ID: US 5658767 A

L4: Entry 14 of 28

File: USPT

Aug 19, 1997

US-PAT-NO: 5658767
DOCUMENT-IDENTIFIER: US 5658767 A

TITLE: Arachidonic acid and methods for the production and use thereof

DATE-ISSUED: August 19, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kyle; David J.	Catonsville	MD	N/A	N/A

US-CL-CURRENT: 435/134; 426/585, 514/558, 514/560

ABSTRACT:

The present invention relates to processes for the production of arachidonic acid containing oils, which preferably are substantially free of eicosapentaneoic acid. The invention also relates to compositions containing such oils, in an unmodified form, and to uses of such oils. In a preferred embodiment, *Pythium insidiosum* is cultivated, harvested and the oil is extracted, recovered, and used as an additive for infant formula. In an alternative embodiment, *Mortierella alpina* is cultivated, harvested and the oil is extracted, recovered, and used as an additive for infant formula.

52 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KIMD](#) | [Draw Desc](#) | [Image](#)

15. Document ID: US 5550156 A

L4: Entry 15 of 28

File: USPT

Aug 27, 1996

US-PAT-NO: 5550156

DOCUMENT-IDENTIFIER: US 5550156 A

TITLE: Microbial oil mixtures and uses thereof

DATE-ISSUED: August 27, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kyle; David J.	Catonsville	MD	N/A	N/A

US-CL-CURRENT: 514/547; 514/560

ABSTRACT:

The present invention relates to compositions including blends of microbial oils, methods of using such compositions, particularly as supplements for infant formula, and methods of increasing the amount of long chain polyunsaturated fatty acids in infant formula.

31 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KIMD](#) | [Draw Desc](#) | [Image](#)

16. Document ID: US 5397778 A

L4: Entry 16 of 28

File: USPT

Mar 14, 1995

US-PAT-NO: 5397778

DOCUMENT-IDENTIFIER: US 5397778 A

TITLE: Enteral formulations for treatment of inflammation and infection

DATE-ISSUED: March 14, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Forse; R. Armour	Brookline	MA	N/A	N/A
Chavali; Sambasiva	Boston	MA	N/A	N/A

US-CL-CURRENT: 514/198, 424/755, 424/764, 424/765, 424/776, 424/DIG.13, 426/804, 426/810, 514/464, 514/468, 514/783, 514/825, 514/886, 514/887, 514/904, 514/905

ABSTRACT:

The present invention features saponin containing enteral formulations for treatment of infection and inflammation. These saponin containing formulations are particularly useful in conjunction with oils rich in .omega.3 polyunsaturated fatty acids such as fish oils and flax oil but also show benefits with .omega.6 rich oils such as borage oil, black currant seed oil, canola oil and rapeseed oil. These formulations may also contain a lignan from the sesamin family.

16 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)
[KWC](#) | [Draw Desc](#) | [Image](#)
 17. Document ID: US 5376541 A

L4: Entry 17 of 28

File: USPT

Dec 27, 1994

US-PAT-NO: 5376541

DOCUMENT-IDENTIFIER: US 5376541 A

TITLE: Process for production of 8,11-eicosadienoic acid using Mortierella alpina

DATE-ISSUED: December 27, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kawashima; Hiroshi	Ibaraki	N/A	N/A	JPX
Akimoto; Kengo	Ibaraki	N/A	N/A	JPX
Yamada; Hideaki	Kyoto	N/A	N/A	JPX
Shimizu; Sakayu	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/136, 435/134, 435/135, 435/244, 435/255.1

ABSTRACT:

A process for the production of 8,11-eicosadienoic acid or a lipid containing 8,11-eicosadienoic acid comprising the steps of, culturing a microorganism having an ability to produce an omega 9 type polyunsaturated fatty acid in a medium supplemented with a .DELTA.5 desaturase inhibitor, or adding a .DELTA.5 desaturase inhibitor to a medium in which said microorganism has been cultured and further culturing the microorganism to produce 8,11-eicosadienoic acid, or a lipid containing 8,11-eicosadienoic acid, and recovering the 8,11-eicosadienoic acid, or the lipid containing 8,11-eicosadienoic acid.

4 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)
[KWC](#) | [Draw Desc](#) | [Image](#)

18. Document ID: US 5374657 A

L4: Entry 18 of 28

File: USPT

Dec 20, 1994

US-PAT-NO: 5374657

DOCUMENT-IDENTIFIER: US 5374657 A

TITLE: Microbial oil mixtures and uses thereof

DATE-ISSUED: December 20, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kyle; David J.	Catonsville	MD	N/A	N/A

US-CL-CURRENT: 514/547; 514/560

ABSTRACT:

The present invention relates to compositions including blends of microbial oils, methods of using such compositions, particularly as supplements for infant formula, and methods of increasing the amount of long chain polyunsaturated fatty acids in infant formula.

22 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	KIMC	Draw Desc	Image
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 19. Document ID: US 5324662 A

L4: Entry 19 of 28

File: USPT

Jun 28, 1994

US-PAT-NO: 5324662

DOCUMENT-IDENTIFIER: US 5324662 A

TITLE: Stereoselective microbial or enzymatic reduction of 3,5-dioxo esters to 3-hydroxy-5-oxo, 3-oxo-5-hydroxy, and 3,5-dihydroxy esters

DATE-ISSUED: June 28, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Patel; Ramesh N.	Bridgewater	NJ	N/A	N/A
McNamee; Clyde G.	Lawrenceville	NJ	N/A	N/A
Banerjee; Amit	Newtown	PA	N/A	N/A
Szarka; Laszlo J.	East Brunswick	NJ	N/A	N/A

US-CL-CURRENT: 435/280; 435/121, 435/135, 435/822, 435/872, 435/938

ABSTRACT:

Microorganisms or reductases derived therefrom reduce a diketo ester ##STR1## to form the associated 3-hydroxy, 5-hydroxy, or 3,5-dihydroxy esters. Selected microorganisms produce the preferred stereoisomers ##STR2## which can be used to prepare antihypercholesterolemic agents such as ##STR3##

8 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	KIMC	Draw Desc	Image
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 20. Document ID: US 5322780 A

L4: Entry 20 of 28

File: USPT

Jun 21, 1994

US-PAT-NO: 5322780

DOCUMENT-IDENTIFIER: US 5322780 A

TITLE: Process for production of omega 9 type polyunsaturated fatty acid

DATE-ISSUED: June 21, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kawashima; Hiroshi	Ibaraki	N/A	N/A	JPX
Yamada; Hideaki	Kyoto	N/A	N/A	JPX
Shimizu; Sakayu	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/134; 435/171, 435/254.1, 435/911

ABSTRACT:

A process for production of omega 9 type polyunsaturated fatty acid or a lipid containing the fatty acid, comprising the steps of culturing a microorganism having an ability to produce omega 9 type polyunsaturated fatty acid or a lipid containing said fatty acid, and recovering the omega 9 type polyunsaturated fatty acid or the lipid containing said fatty acid.

12 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)[KMC](#) | [Draw Desc](#) | [Image](#)[Generate Collection](#)

Terms	Documents
mortierella alpina and (desaturase or oxidase or oxidoreductase)	28

[Display](#)

10

Documents, starting with Document:

21

[Display Format:](#)

REV

[Change Format](#)

WEST**Generate Collection****Search Results - Record(s) 21 through 28 of 28 returned.****21. Document ID: US 5093249 A**

L4: Entry 21 of 28

File: USPT

Mar 3, 1992

US-PAT-NO: 5093249

DOCUMENT-IDENTIFIER: US 5093249 A

TITLE: Process for production of dihomo-.gamma.-linolenic acid and inhibitor for unsaturation reaction at .DELTA.5-position of fatty acid

DATE-ISSUED: March 3, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nakajima; Toshiaki	Ciba	N/A	N/A	JPX
Shimauchi; Toshitsugu	Ciba	N/A	N/A	JPX

US-CL-CURRENT: 435/135; 435/134

ABSTRACT:

Dihomo-.gamma.-linolenic acid is produced by cultivating a microorganism having an ability to produce dihomo-.gamma.-linolenic acid on a culture medium containing a compound having an ability to inhibit an unsaturation reaction at a .DELTA.5-position of fatty acid.

9 Claims, 0 Drawing figures Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)[KDDC](#) | [Draw Desc](#) | [Image](#)**22. Document ID: US 4900348 A**

L4: Entry 22 of 28

File: USPT

Feb 13, 1990

US-PAT-NO: 4900348

DOCUMENT-IDENTIFIER: US 4900348 A

TITLE: Production of disease suppressive compost and container media, and microorganism culture for use therein

DATE-ISSUED: February 13, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoitink; Harry A.	Wooster	OH	N/A	N/A

US-CL-CURRENT: 71/6; 435/252.1, 435/252.4, 435/253.3, 435/256.7, 435/42, 435/850,
435/879, 435/945, 71/12, 71/23, 71/24, 71/9

ABSTRACT:

Compost, e.g. hardwood bark, is rendered suppressive to plant pathogens, such as Rhizoctonia solani, Pythium ultimum and Fusarium, and/or diseases caused thereby by adding to the compost, desirably after peak heating has been achieved but before substantial recolonization of the compost by mesophilic microorganisms has occurred, one or more microorganisms antagonistic to the plant pathogen. Container media also is rendered suppressive to plant pathogens and/or diseases caused thereby by amending the media with the just-described prepared suppressive compost or, alternatively, by amending separately with the compost and with Trichoderma fungus and antagonistic bacterium separately or mixed together. Desirably, the inoculated antagonistic microorganisms comprise Trichoderma hamatum species A.T.C.C. No. 20765 or 20764, together with Xanthomonas maltophilia bacterium species A.T.C.C. No. 53199 or a Flavobacterium balustinum isolate 299, A.T.C.C. No. 53198 species, A.T.C.C. No. 53198.

16 Claims, 1 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KWMC](#) | [Draw Desc](#) | [Image](#)

23. Document ID: US 4642131 A

L4: Entry 23 of 28

File: USPT

Feb 10, 1987

US-PAT-NO: 4642131

DOCUMENT-IDENTIFIER: US 4642131 A

TITLE: Production of disease suppressive compost and microorganism culture for use therein

DATE-ISSUED: February 10, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoitink; Harry A. J.	Wooster	OH	N/A	N/A

US-CL-CURRENT: 71/6; 424/93.3, 435/252.1, 435/252.4, 435/253.3, 435/254.7, 435/850,
435/874, 435/945, 71/12, 71/23, 71/24, 71/9

ABSTRACT:

Compost is rendered suppressive to plant pathogens, such as Rhizoctonia solani, Pythium ultimum and Fusarium, and/or diseases caused thereby by adding to the compost, desirably after peak heating has been achieved but before substantial recolonization of the compost by mesophilic microorganisms has occurred, one or more microorganisms antagonistic to the plant pathogen. Desirably the inoculated antagonistic microorganisms comprise Trichoderma hamatum species A.T.C.C. No. 20765 or 20764, together with a Pseudomonas maltophilia bacterium species A.T.C.C. No. 53199 or a Flavobacterium species, A.T.C.C. No. 53198.

18 Claims, 6 Drawing figures Exemplary Claim Number: 1,13
Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMC	Draw Desc	Image
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24. Document ID: JP 09121873 A

L4: Entry 24 of 28

File: JPAB

May 13, 1997

PUB-NO: JP409121873A
DOCUMENT-IDENTIFIER: JP 09121873 A
TITLE: CYTOCHROME B5 GENE

PUBN-DATE: May 13, 1997

INVENTOR-INFORMATION:

NAME

COUNTRY

SHIMIZU, AKIRA

KOBAYASHI, TATSUHIKO

INT-CL (IPC): C12N 15/09; C07H 21/04; C12N 1/21; C12P 21/02

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a new gene coding cytochrome b5 having a specific amino acid sequence and originated from Mortierella alpina, and useful for producing an enzyme capable of efficiently producing a human essential fatty acid, etc., by being combined with desaturase.

SOLUTION: A new DNA sequence codes the polypeptide of cytochrome b5 originated from Mortierella alpina and having an amino acid sequence of the formula, or a modified polypeptide holding the activity of the cytochrome b5 and having the amino acid sequence of the formula wherein one or more amino acids are deleted or substituted or to which one or more other amino acids are added. The DNA sequence is useful for producing the cytochrome b5 which can reconstitute an electron transfer system in vitro and efficiently produce a human essential fatty acid, etc. The gene is obtained by extracting genome DNA from Mortierella alpina LS-4 by a conventional method, and screening the obtained library with a probe.

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Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMC	Draw Desc	Clip Img	Image
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25. Document ID: CN 1283230 A, WO 9933958 A2, ZA 9811821 A, AU 9917748 A, EP 1042485 A2

L4: Entry 25 of 28

File: DWPI

Feb 7, 2001

DERWENT-ACC-NO: 1999-444067
DERWENT-WEEK: 200129
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TITLE: New isolated delta5-fatty acid desaturase enzymes useful in gene therapy

INVENTOR: MICHAELSON, L; NAPIER, J A ; STOBART, K

PRIORITY-DATA: 1998GB-0014034 (June 29, 1998), 1997GB-0027256 (December 23, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
CN 1283230 A	February 7, 2001	N/A	000	C12N015/53
WO 9933958 A2	July 8, 1999	E	035	C12N009/00
ZA 9811821 A	September 29, 1999	N/A	036	C12N000/00
AU 9917748 A	July 19, 1999	N/A	000	C12N009/00
EP 1042485 A2	October 11, 2000	E	000	C12N015/53

INT-CL (IPC) : A23L 0/00; A61B 0/00; A61K 31/20; C12N 0/00; C12N 1/19; C12N 5/10; C12N 9/00; C12N 9/02; C12N 15/11; C12N 15/53; C12N 15/81; C12Q 1/68

ABSTRACTED-PUB-NO: WO 9933958A

BASIC-ABSTRACT:

NOVELTY - New isolated Delta 5-fatty acid desaturase DNA (A) is obtained from Mortierella alpina and Caenorhabditis elegans.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) isolated Caenorhabditis elegans Delta 5-fatty acid desaturase;
- (2) a polypeptide encoded by a DNA sequence as in (A);
- (3) a DNA sequence obtained by modification of a functional natural gene encoding a Delta 5-fatty acid desaturase as in (1);
- (4) a vector containing a DNA sequence or any portion of a DNA sequence as in (A);
- (5) an organism engineered to produce high levels of a polypeptide as in (2);
- (6) a method of producing polyunsaturated fatty acids by contacting a suitable substrate with a Delta 5-fatty acid desaturase as in (1) or a polypeptide as in (2);
- (7) a method of converting dihomogamma linolenic acid to arachidonic acid where the conversion is catalyzed by a Delta 5-fatty acid desaturase as in (1) or a polypeptide as in (2);
- (8) an organism engineered to produce high levels of a product of a reaction catalyzed by a Delta 5-fatty acid desaturase as in (1) or by a polypeptide as in (2);
- (9) an organism engineered to carry out the method of (6) or (7);
- (10) a seed or other reproductive material derived from an organism as in (8) or (9);
- (11) an isolated multienzyme pathway which includes a Delta 5-desaturase as in (1) or a polypeptide as in (2);
- (12) a compound produced by a conversion of a substrate, where the conversion is catalyzed by a Delta 5-desaturase as in (1) or by a polypeptide as in (2);
- (13) an intermediate compound produced by a reaction catalyzed by a Delta 5-desaturase as in (1) or by a polypeptide as in (2);
- (14) a foodstuff or dietary supplement containing a polyunsaturated fatty acid produced by the method of (6) or (7);
- (15) prostaglandins synthesized by a biosynthetic pathway including a catalytic activity of a Delta 5- desaturase as in (1) or by a polypeptide as in (2);
- (16) a method for modulation of prostaglandin synthesis by the control of the levels of expression of a DNA sequence as in (A);
- (17) a probe comprising all or part of a DNA sequence as in (2) or (3) or an equivalent RNA sequence;
- (18) a diagnostic or search probe comprising all or part of a Delta 5-desaturase as in (1) or a polypeptide as in (2); and
- (19) a method of isolating Delta 5-desaturase using the probe of (16).

ACTIVITY - Antilipemic.

MECHANISM OF ACTION - The Delta 5-fatty acid desaturases catalyze the production of polyunsaturated fatty acids by converting dihomogamma linolenic acid to arachidonic acid.

USE - The Delta 5-fatty acid desaturases catalyze the production of polyunsaturated fatty acids, e.g. the conversion of dihomogamma linolenic acid to arachidonic acid (claimed). The genes can be used in gene therapy as a preventative treatment, e.g. in patients suffering from high levels of cholesterol or other conditions where administration of polyunsaturated fatty acids may have beneficial disease-preventative effects. The polyunsaturated fatty acids can be used in foodstuffs or dietary supplements. The Delta 5-fatty acid desaturases can also be used for the synthesis of prostaglandins or modulation of the synthesis. The products can also be used for detection and diagnosis.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#)

[KWORD](#) | [Drawn Desc](#) | [Image](#)

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 D D 26 Document ID: MX 9909328 A1, WO 9846764 A1, AU 9871147 A, NO 9904926 A, EP 996732 A1, US 6051754 A, CZ 9903584 A3, AU 720677 B, BR 9808506 A, US 6075183 A, SK 9901399 A3, CN 1253588 A, NZ 337459 A, HU 200001517 A2

L4: Entry 26 of 28

File: DWPI

Sep 1, 2000

DERWENT-ACC-NO: 1999-080739

DERWENT-WEEK: 200139

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TITLE: Nucleic acid construct able to express fatty acid desaturase in plants - useful in human or animal nutrition, as cosmetics and therapeutically, e.g. for restenosis, cancer and diabetes

INVENTOR: CHAUDHARY, S; HUANG, Y ; KNUTZON, D ; LEONARD, A E ; MUKERJI, P ; THURMOND, J

PRIORITY-DATA: 1997US-0956985 (October 24, 1997), 1997US-0833610 (April 11, 1997), 1997US-0834033 (April 11, 1997), 1997US-0834655 (April 11, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
MX 9909328 A1	September 1, 2000	N/A	000	C12N015/53
WO 9846764 A1	October 22, 1998	E	209	C12N015/53
AU 9871147 A	November 11, 1998	N/A	000	N/A
NO 9904926 A	November 30, 1999	N/A	000	C12N000/00
EP 996732 A1	May 3, 2000	E	000	C12N015/53
US 6051754 A	April 18, 2000	N/A	000	C12N015/82
CZ 9903584 A3	May 17, 2000	N/A	000	C12N015/53
AU 720677 B	June 8, 2000	N/A	000	C12N015/53
BR 9808506 A	May 23, 2000	N/A	000	C12N015/53
US 6075183 A	June 13, 2000	N/A	000	A01H005/00
SK 9901399 A3	May 16, 2000	N/A	000	C12N015/53
CN 1253588 A	May 17, 2000	N/A	000	C12N015/53
NZ 337459 A	July 28, 2000	N/A	000	A61K031/20
HU 200001517 A2	August 28, 2000	N/A	000	C12N015/53

INT-CL (IPC): A01H 5/00; A23K 1/00; A23L 1/30; A61K 31/20; C07H 21/04; C11B 1/00; C12N 0/00; C12N 1/21; C12N 5/04; C12N 5/10; C12N 15/53; C12N 15/82; C12P 7/64

ABSTRACTED-PUB-NO: US 6051754A

BASIC-ABSTRACT:

Nucleic acid construct contains: (a) at least one of 1617 (S1), 1488 (S2) and 1488 (S3) bp sequences (I), or (b) any sequence encoding the same proteins as (I), coupled to a heterologous sequence, particularly an expression control sequence functional in plants. Also new are: (A) recombinant plant cells containing at least one DNA encoding a Mortierella alpina fatty acid desaturase (FAD), so that it can produce a polyunsaturated fatty acid (PUFA); (B) oils produced by these cells (or plants containing them), and (C)